

## NOMENCLATURAL NOTES -- III

Harold N. Moldenke

Continued studies in the herbarium of the New York Botanical Garden and in the field have brought to light several as yet undescribed species, varieties, forms, and hybrids, and have revealed the necessity of publishing certain new names and combinations.

**AEGIPHILA VALLENSIS** Moldenke, sp. nov.

Frutex scandens; ramis dense lanatis; foliis oppositis; petiolis dense lanatis crassis; laminis firme chartaceis vel subcoriaceis ovatis longe acuminatis integris, ad basin rotundatis, juventute lanatis, supra maturitate substrigoso-pubescentibus, subtus dense sublanuginoso-villosis; inflorescentiis terminalibus axillaribusque cymosis vel paniculatis multifloris; pedunculis bracteisque bracteolisque dense flavido-lanatis; limbo calycis 4-lobato.

Large woody vine; branches obtusely tetragonal, medium-stout or slender, very densely lanate with matted cinereous hairs; principal internodes 7--11 cm. long; leaf-scars and buds very densely lanate like the branches; leaves decussate-opposite; petioles stout, 10--15 mm. long, very densely lanate with cinereous matted hairs; blades firmly chartaceous or subcoriaceous, dull-green above, ashy beneath, ovate, 17--25 cm. long, 7--12 cm. wide, long-acuminate at apex, rounded at base, entire, substrigose-pubescent above, lanate when young, very densely sublanuginous-villous with cinereous or yellowish hairs beneath; midrib slender, slightly prominent above, conspicuously prominent beneath; secondaries slender, 11--15 per side, arcuate-ascending, joined only by small tertiaries at the margins, subimpressed above, prominulous beneath; tertiaries abundant, subimpressed above, prominulous beneath; inflorescence terminal and in the axils of the uppermost pair of leaves, cymose or paniculate, many-flowered; peduncles densely lanate like the branches, the axillary ones 1--2 cm. long, the terminal ones to 7 cm. long; foliaceous bracts sometimes present beneath the terminal panicle, densely yellowish-lanate or -villous; bractlets and prophylla numerous, linear-filiform, 10--15 mm. long, twisted, densely villous-lanate and almost hidden in the dense tomentum of the inflorescence; calyx cyathiform, its tube about 6 mm. long and 3 mm. wide, very densely villous with yellowish forward-pointing hairs, its limb 4-lobed, the lobes about 2 mm. long, obtuse or acute, densely villous like the tube; corolla infundibular or hypocrateriform, sulphur-yellow, its

tube slender, 4--5 mm. long, glabrous, its limb 4-parted, the lobes about 3 mm. long, obtuse at apex, glabrous; stamens included; pistil long-exserted; fruiting-calyx incrassate, to about 1 cm. long and wide, densely villous, its rim deeply 4-lobed; fruit drupaceous, orange, globose, about 9 mm. long and wide, fleshy, glabrous.

The type of this species was collected by José Cuatrecasas (no. 15564) in woods at La Laguna, alt. 1250--1400 m., on the left side of the valley of the Río Sanquinini, on the west slope of the Cordillera Occidental, El Valle, Colombia, between December 10 and 20, 1943, and is deposited in the Britton Herbarium at the New York Botanical Garden. The species is obviously related to A. cordata Poepp.

**CORDIA RANGELENSIS** Moldenke, sp. nov.

Frutex vel arbor; ramis ramulisque gracilibus griseis irregularibus, juventute dense adpresso-puberulentibus, senectute glabrescentibus; foliis alternis; petiolis crassiusculis adpresso-puberulentibus canaliculatis vel sulcatis; laminis coriaceis suborbicularibus vel ellipticis vel suboblancoelatis, acutis vel brevissime acuminatis, integris subrevolutis, ad basin attenuatis, utrinque microscopice scabrellis pernitidis.

Shrub or tree; branches and branchlets slender, gray, irregular or even slightly zigzag, the youngest parts densely appressed-puberulent with very short yellowish-brown hair visible only under a hand-lens, the older parts glabrescent; leaves alternate; petioles rather stout, 5--10 mm. long, appressed-puberulent like the branchlets, canaliculate or sulcate above, wrinkled in drying; blades coriaceous, varying from suborbicular to elliptic or slightly oblanceolate, 3.5--8.5 cm. long, 2--4.2 cm. wide, normally acute or very short-acuminate at apex, often (apparently abnormally) obtuse or even retuse, attenuate to the base, entire, subrevolute, microscopically scabrellous on both surfaces, very shiny on both surfaces, appressed-puberulent on the midrib beneath; midrib slender, sharply prominent above, prominent beneath; secondaries, tertiaries, and veinlets forming a dense and conspicuous reticulum which is conspicuous and prominent on both surfaces; inflorescence axillary, solitary in one of the uppermost axils, about 16-flowered; peduncles slender, 1.5 cm. long or less, several-branched, appressed-puberulent and also with a few longer spreading hairs above; pedicels slender, about 1 mm. long, puberulent and often also pilose with longer spreading hairs; calyx cupuliform, 3--4 mm. long, about 3 mm. wide, firm, appressed-puberulent throughout, irregularly split into 2 or more lobes toward the apex.

The type of this species was collected by Juan Tomás Roig

y Mesa and Julián Acuña Galé (no. 4531) on the Sierra de Rangel, Finar del Río, Cuba, between August 27 and 30, 1927, and is deposited in the Britton Herbarium at the New York Botanical Garden. Another collection was made by Acuña Galé (no. 14119) at Taco-Taco, Rangel, in March, 1923.

CORNUTIA LATIFOLIA f. ALBA Moldenke, f. nov.

Haec forma a forma typica speciei corollis albis recedit. -- This form differs from the typical form of the species in having white corollas.

The type was collected by William Campbell Steere, without number, in chaparral at Champotón, Campeche, Mexico, in July, 1932, and is deposited in the herbarium of the Instituto Biología at Mexico City.

×CRYPTOSTEGIA HYBRIDA Moldenke, nom. nov.

*Cryptostegia madagascariensis* x *C. grandiflora* Polhamus, Hill, & Elder, U. S. Dept. Agr. Tech. Bull. 457: 5--21, pl. 1 & 3--9. 1934.

DERMATOCALYX PANDURATUS Moldenke, sp. nov.

Arbor myrmecophila; ramis griseis glabris; foliis oppositis, cicatricibus amplis suberosis elevatis glabris; laminis firme membranaceis panduriformibus vel obovatis integris acuminatis ad basin subamplexicaulibus utrinque glabris.

Tree to 8 m. tall; trunk 13 cm. in diameter at breast height; branches rather stout, gray, glabrous, prominently lenticellate, rather angular, flattened at the nodes; leaf-scars large, broad, elevated, with corky margins; leaves decussate-opposite; petioles very thick, about 5 mm. long or less, somewhat arched or humped, glabrous; leaf-blades firmly membranous, panduriform or obovate, 13--28 cm. long, 5--12 cm. wide, acuminate at apex, entire, subamplexicaul at base, glabrous on both surfaces; midrib flattened or slightly canaliculate above, stout and prominent beneath; secondaries heavy, about 6 per side, ascending, arcuate near the margins, flattened or slightly impressed above, very prominent beneath; vein and veinlet reticulation subprominulous on both surfaces, especially beneath; inflorescence axillary, glomerate or fasciculate; flowers not seen, but said to be white; fruiting-pedicels very heavy, about 5 mm. long, glabrous; fruiting-calyx very stout and heavy, campanulate-cupuliform, about 8 mm. long and 15 mm. wide when fully mature, leathery, glabrous, somewhat 2-lipped and irregularly lobed, often scarious-margined; fruit subglobose, about 1 cm. long and wide, glabrous, hard, 2-celled; seeds very numerous on both surfaces of the central placenta.

The type of this species was collected by Elbert L. Little, Jr. (no. 6317; U. S. Dept. Agr. Forest Service

96771) in partly cut wet tropical forest, alt. 10 m., 2 km. south of San Lorenzo, Esmeraldas, Ecuador, April 21, 1943, and is deposited in the Britton Herbarium at the New York Botanical Garden. The collector records the vernacular name "mata palo" and reports that there are "black chambers from ants all over."

*ERIOCAULON ATABAFENSE* Moldenke, Known Geogr. Distrib. Eriocaul. 5 & 32, nom. nud. (1946), sp. nov.

Herba; foliis caespitosis firmis linearibus utrinque glabris nitidis stramineis argute acutis vel mucronulatis; pedunculis paucis costatis paullo contortis glabris; vaginis firmis stramineis laxis glabris nitidis oblique fissis; capitulis albis duris.

Herb to 30 cm. tall; leaves cespitose, the fresh ones few, firm, to 3.8 cm. long, linear, glabrous on both surfaces, shiny, stramineous, sharply acute or mucronulate at the apex, not visibly fenestrate, the old ones thin-membranous, numerous, translucent, very plainly fenestrate, to 12 cm. long, very weak and flaccid, glabrous; peduncles one or more per plant, 12--17 cm. long, several-costate, somewhat twisted, glabrous; sheaths firm, stramineous, loose, about 3.8 cm. long, glabrous, shiny, obliquely split at the apex, the lobes sharply acute; heads very hard, not flattening in pressing, very white.

The type of this species was collected by Llewelyn Williams (no. 13858) in sandy soil along a stream at Chamuchina, alt. 280 m., Río Atábapo, Amazonas, Venezuela, on January 19, 1942, and is deposited in the United States National Herbarium at Washington.

*ERIOCAULON CAPITULATUM* Moldenke, sp. nov.

Herba pumila; foliis caespitosis paucis parvis glabris non fenestratis; vaginis membranaceis laxis glabris fissis; pedunculis solitariis glabris 5 cm. longis; capitulis griseis vel albidis; bracteis involucrentibus paucis obovato-ellipticis pallide stramineis glabris, ad apicem rotundatis.

Plants very small, tufted; stems obsolete; leaves cespitose, few, 1--2 cm. long, ampliate-sheathing at base, blunt at apex, glabrous on both surfaces; not visibly ribbed nor fenestrate; sheaths membranous, about 18 mm. long, glabrous, split at the apex, loose; peduncles solitary, about 5 cm. long, glabrous; heads about 5 mm. wide, grayish or whitish; involucrent bractlets few, obovate-elliptic, pale-stramineous throughout, about 2.6 mm. long and 1.3 mm. wide, rounded and slightly cucullate at the apex, glabrous and shiny on both surfaces; receptacle subglabrate; receptacular bractlets obovate, brown towards the apex, about 1.8 mm. long and 1.3 mm. wide, concave within, convex on the outside, rounded at

apex, short-pilose at the apex but not tufted-bearded; staminate florets: sepals 3, obovate-cuneate, spathaceous-conate at the base, brown except at the united base, about 1.56 mm. long and 0.7 mm. wide, slightly cucullate and apiculate at the apex, glabrous on both surfaces; petals 3, united into a slender hyaline tube about 0.6 mm. long, the free apical lobes also about 0.6 mm. long, hyaline, densely white bearded at the apex; stamens 6; anthers dark-brown or black; pistillate florets: sepals 3, free and separate to the base, dark-brown or nigrescent throughout, obovate, navicular, carinate or short-alate on the back below the middle, about 1.56 mm. long and 1.1 mm. wide, short-acuminate at the apex, white-pilose with very short hairs throughout on the back; petals 3, separate to the base, oblanceolate, about 1.8 mm. long and 0.5 mm. wide, hyaline, black-glanduliferous below the apex, white-pilose on the inner surface; ovary 3-celled, 3-ovulate; style about 0.6 mm. long; stigmas 3, about 0.6 mm. long.

The typw of this dwarf species was collected by Carl August Ehrenberg (no. 219, in part) somewhere in Mexico and is deposited in the Herbario Nacional of the Instituto Biologia de Universidad Nacional de Mexico (no. 2608, in part) at Mexico City. The heads superficially resemble those of E. Ehrenbergianum Klotzsch, but differ in their essential characters.

*ERIOCAULON PARADOXUM* Moldenke, sp. nov.

Herba perpumila; foliis paucis caespitosis glabris non fenestratis; pedunculis solitariis 2 cm. longis glabris; vaginis membranaceis laxis fissis glabris; capitulis griseis; bracteis involucrentibus pallide stramineis oblongis glabris, ad apicem rotundatis.

Plants very small, tufted; stems obsolete; leaves few, cespitose, 1--2 cm. long, 1.5--2 mm. wide, blunt at the apex, glabrous on both surfaces, not visibly ribbed nor fenestrate, erect; peduncles solitary, about 2 cm. long, glabrous; sheaths membranous, loose, about 15 mm. long, split at the apex, glabrous; heads grayish, about 5 mm. in diameter; involucrel bractlets pale-stramineous, oblong, 2--2.3 mm. long, 1--2 mm. wide, rounded at the apex, glabrous on both surfaces; receptacle glabrate; staminate florets not well developed (or past anthesis?), very few; receptacular bractlets cuneate-obovate, very dark-brown or black above the middle, about 1.6 mm. long and 1.3 mm. wide, triangular-acuminate and cucullate at the apex, densely white-pilose with short appressed hairs on the back and margins, glabrous within, not tufted-bearded; sepals 3, hyaline, elliptic, about 0.8 mm. long and 0.3 mm. wide, concave within, convex on the back, brownish towards the obtuse apex, bearded at

the apex on the back; petals 3, united into a hyaline tube about 0.26 mm. long, the apical free portions also about 0.26 mm. long, glabrous; stamens not seen; rudimentary pistil present; pistillate florets: sepals 3, free to the base, dark-brown throughout, elliptic or subobovate, navicular, about 1.8 mm. long, 0.7--1 mm; wide, acute at the apex, white pilose with obscure appressed hair on the back, more conspicuously so on the upper margins and apex; petals 3, free to the base, hyaline, oblanceolate, about 1.5 mm. long and 0.4 mm. wide, acute at the apex, attenuate to the base, long-pilose on the back from the middle to the apex, black-glanduliferous just below the apex; ovary 3-celled, 3-ovulate; style about 0.7 mm. long, glabrous; stigmas 3, about 0.2 mm. long.

The type of this very dwarf species was collected by Carl August Ehrenberg (no. 219, in part) somewhere in Mexico and is deposited in the Herbario Nacional of the Instituto Biología de Universidad Nacional de Mexico (no. 2608, in part) at Mexico City. The species superficially greatly resembles E. microcephalum H.B.K. in its habit of growth, but differs in the technical characters of its heads and florets. The foliage of E. paradoxum and E. capitulatum is almost identical.

ERIOCAULON SIERRALEONENSE Moldenke, Known Geogr, Distrib.

Eriocaul. 21 & 40, hyponym (1946), nom. nov.

Eriocaulon pumilum Afzel. ex Körn., Linnaea 27: 621.

1856 [not E. pumilum Raf., Atl. Journ. 121. 1832].

ERIOCAULON TOGOËNSE Moldenke, Known Geogr. Distrib. Eriocaul. 21 & 41, hyponym (1946), nom. nov.

Eriocaulon xeranthemoides Van Heurck & Muell.-Arg. in Van

Heurck, Obs. Bot. 103. 1870 [not E. xeranthemoides Bong., Act. Petrop. Sci. Math., sér. 4, 1: 635. 1831].

GALPINSIA LAVANDULAEFOLIA var. GLANDULOSA (Munz) Moldenke, comb. nov.

Oenothera lavandulaefolia var. glandulosa Munz, Am.

Journ. Bot. 16: 705. 1929.

HALERPESTES CYMBALARIA var. SAXIMONTANUS (Fernald) Moldenke, comb. nov.

Ranunculus cymbalaria var. saximontanus Fernald, Rhodora

16: 162. 1914.

HYPERBAENA CUATRECASASI Moldenke, sp. nov.

Frutex scandens; ramis pendulis gracilibus glabris; petiolis gracilibus sulcatis glabris, ad basin curvatis; laminis coriaceis nitidis ovatis longe acuminatis integris utrinque

glabris, ad basin rotundatis, pli-nervatis; inflorescentiis paniculatis.

Large woody vine, mostly with hanging branches; branches slender, glabrous; leaves alternate; petioles slender, 4--6.3 cm. long, glabrous, sulcate, incrassate and abruptly curved at base; blades coriaceous, bright-green and shiny on both surfaces, ovate, 7--13 cm. long, 2.7--6.5 cm. wide, long-acuminate at the apex, entire, rounded at the base, glabrous on both surfaces; venation pli-nerved, 2 secondaries issuing at the very base of the blade, the other 2 issuing 5--6 mm: above the base, prominent on both surfaces; tertiaries and veinlet reticulation abundant, very slender, prominulous on both surfaces; staminate inflorescence paniculate, to 15 cm. long, many-branched, glabrous throughout; flowers greenish-yellow; prophylla 3, narrow-lanceolate, about 0.7 mm. long, sharply acute at apex, glabrous, membranous-margined, alternate with the outer sepals; sepals 6, the outer 3 elliptic, about 2.6 mm. long and 2 mm. wide, thick, convex on the back, rounded at apex, glabrous, scarious-margined, the inner 3 elliptic-rotund, very convex on the back, about 2.8 mm. long and 2.2 mm. wide, cupped at the base with inflexed margins, subacutely hooded at the apex, glabrous, scarious-margined; petals 6, spatulate, whitish, delicate, about 1.5 mm. long and 1 mm. wide, each enfolding one stamen when mature, shallowly bilobed at the apex, glabrous; stamens 6, about 1.3 mm. long, separate; pistillate flowers and fruit not seen.

The type of this species was collected by José Cuatrecasas (no. 16939) in the neighborhood of Palestina, alt. 5--50 m., on the Río San Juan, Choco, Colombia, between March 12 and 14, 1944, and is deposited in the Britton Herbarium at the New York Botanical Garden.

JUNELLIA CONNATIBRACTEATA f. GLOMERATA (Monticelli) Moldenke, comb. nov.

Verbena connatibracteata f. glomerata Monticelli, Lilloa 3: 358. 1938.

JUNELLIA CONNATIBRACTEATA f. ROSULATA (Monticelli) Moldenke, comb. nov.

Verbena connatibracteata f. rosulata Monticelli, Lilloa 3: 358. 1938.

JUNELLIA LAVANDULIFOLIA var. COLCHAGUENSIS (R. A. Phil.) Moldenke, comb. nov.

Verbena colchaguensis R. A. Phil., Anal. Univ. Chile 1873 521. 1873.

JUNELLIA ROSULATA Moldenke, sp. nov.

Suffrutex pumilus procumbens; ramis numerosis brevibus procumbentibus radiatis; ramulis numerosissimis brevissimis dense rosulatis; internodiis perabbreviatis dense foliatis; foliis sessilibus rigidis tripartitis utrinque leviter pubescentibus, ad basin ampliatis amplexicaulibus, lobis linear-oblongatis obtusis revolutis; corollis rubellis.

Dwarf procumbent subshrub with heavy woody stems and numerous short procumbent radiating branches; branchlets and twigs very numerous, very short, densely rosulate, the sterile ones with extremely abbreviated internodes, very densely leafy, forming a solid moss-like mat or cushion, the fertile branchlets more elongate, to 5 cm. long, rather densely short-pubescent, with internodes elongated to 8 mm., often more abbreviated; nodes slightly ampliate, annulate by the practically contiguous leaf-bases; leaves sessile, rigid, opposite, 3-parted to the slightly ampliate and clasping base, lightly pubescent on both surfaces with uniform, whitish, forward-pointing hairs, the lobes practically equal, linear-oblong, about 4 mm. long and 1 mm. wide (on the fertile branchlets), obtuse or rounded at apex, the margins revolute, much smaller on the sterile branchlets, bright-green on both surfaces, the lower ones hidden from the light by the densely matted upper ones but persistent, gray, brown, or black and dry; peduncles abbreviated, to 1 cm. long, densely short-pubescent with spreading white hairs; inflorescence terminal, densely many-flowered; rachis densely whitish-pubescent; bractlets ovate-lanceolate, 5--6 mm. long, 2 mm. wide at base, attenuate to the acute or acuminate apex, strongly costate on the back, rather densely whitish-pubescent with spreading hairs; calyx tubular, 6--8 mm. long, densely short-pubescent with spreading white hairs, 5-ribbed, the rim shortly 5-toothed; corolla pink, conspicuously exerted, its tube to 10 mm. long, slightly curvate, densely short-pubescent with spreading whitish hairs outside, its limb 5-parted, its lobes 2--3 mm. long, more or less short-pubescent outside, glabrous within.

The type of this remarkable species was collected by my good friend and colleague, Teodoro Meyer (no. 9586), at Tecka, Chubut, Argentina, on December 25, 1945, and is deposited in the Britton Herbarium at the New York Botanical Garden. The species is apparently related to *J. minutifolia* (R. A. Phil.) Moldenke, but differs in its densely rosulate habit and larger leaves. It may also be closely related to *J. Struthionum* (Speg.) Moldenke, a species known to me only from the original description.

*JUNELLIA ROSULATA* f. *ALBA* Moldenke, f. nov.

Haec forma a forma typica speciei corollis albis recedit.

-- This form differs from the typical form of the species in



having white corollas.

The type of this form was collected by Teodoro Meyer (no. 9587) at Estancia "La Mimosa", Chubut, Argentina, on December 25, 1945, and is deposited in the Britton Herbarium at the New York Botanical Garden.

*JUNELLIA TRIDACTYLA* (R. A. Phil.) Moldenke, comb. nov.

*Verbena tridactyla* R. A. Phil., Anal. Mus. Nac. Chile Bot. 1891: 59. 1891.

*LANTANA HINTONI* Moldenke, sp. nov.

Frutex; ramis ramulisque gracillimis obtuse tetragonis brunnescentibus parce strigillosis; petiolis gracilibus strigosos-pubescentibus; laminis subchartaceis ovatis longe acuminatis serratis, ad basin acutis, supra strigilloso-scabridis, subtus strigillosis vel puberulis densissime punctatis; inflorescentiis axillaribus; bracteis ovatis.

Shrub; branches and branchlets very slender, obtusely tetragonal, brunnescent, rather sparsely strigillose-pilous; principal internodes 4--6.5 cm. long; leaves decussate-opposite; petioles slender, 4--8 mm. long, rather abundantly strigose-pubescent with appressed whitish hairs; blades subchartaceous, uniformly bright-green on both surfaces, ovate, 4--7 cm. long, 2--4 cm. wide, long-acuminate at apex, acute at base, rather coarsely but regularly serrate except at the very apex and base, strigillose and scabridous above, strigillose and very densely punctate beneath or puberulent; midrib slender, plane above, prominent beneath; secondaries slender, 3 or 4 per side, arcuate-ascending, not at all pli-nerved, plane above, subprominulous beneath, usually rather densely puberulent beneath; vein and veinlet reticulation abundant, but apparent only under a hand-lens; inflorescence axillary, 1 or 2 per node, shorter than the subtending leaf; peduncles very slender, 2.5--4 cm. long, strigillose; heads many-flowered, densely capitate, about 1 cm. long and wide, not elongating after anthesis; bracts ovate, the lowest to almost 1 cm. long and 6 mm. wide; acuminate at apex, strigose-puberulent and densely punctate; corolla-tube about 5 mm. long, its limb about 3 mm. wide, the outer portion of the limb and the exerted portion of the tube densely puberulent.

The type of this species was collected by George B. Hinton (no. 9307) at I. R. F. Placeres, alt. 1050 m., Zihuaqueo, Mina district, Guerrero, Mexico, on August 21, 1936, and is deposited in the Britton Herbarium at the New York Botanical Garden. It was first identified by me and distributed as *L. canescens* H.B.K., and later as *L. Langlassei* Moldenke, from both of which species it proves to be abundantly distinct. The collector records the vernacular name

"toronjil."

LANTANA MINASENSIS Moldenke, sp. nov.

Frutex erectus; ramis gracilibus obtuse tetragonis parce aculeolatis vel inermibus stramineis obscure pulverulento-puberulis vel glabrescentibus; ramulis acutiore tetragonis inermibus pulverulento-puberulis; nodis annulatis; petiolis gracillimis obscure puberulis vel glabrescentibus; lemnis chartaceis griseo-viridibus lanceolatis vel lanceolato-ellipticis longe acuminatis serrulatis, ad basin acutis vel plerumque acuminatis, supra scabris, subtus leviter puberulis; inflorescentiis axillaribus.

Erect shrub, freely branching; branches rather slender, obtusely tetragonal, sparingly aculeolate or unarmed, stramineous, very finely and obscurely pulverulent-puberulent or glabrescent; twigs more acutely tetragonal, unarmed, pulverulent-puberulent; nodes annulate; principal internodes 1--3 cm. long; leaves decussate-opposite, numerous; petioles very slender, 3--7 mm. long, very obscurely puberulent or glabrescent; blades chartaceous, gray-green, lanceolate or lanceolate-elliptic, 3--7 cm. long, 1--3 cm. wide, rather long-acuminate at apex, acute or usually acuminate at base, finely serrulate with blunt appressed teeth from apex to base, pronouncedly scabrous above, lightly puberulent and not scabrous beneath; midrib very slender, plane or slightly impressed above, prominent beneath; secondaries very slender, about 5 per side, arcuate-ascending, extending to the very margins, plane or subimpressed above, prominulous beneath; inflorescence axillary, usually borne only in the 2 or 3 uppermost axils of the twigs, shorter than the mature subtending leaves; peduncles 1 or 2 per axil, very slender, 1.5--2.5 cm. long, tetragonal, minutely puberulous; heads many-flowered, the canescent-puberulous rachis elongated to 1 cm. during anthesis; bractlets lanceolate-ovate, about 2 mm. long, 1 mm. wide at base, densely canescent-puberulous, sharply acute at the apex; calyx about 0.7 mm. long, canescent-puberulous outside; corolla bright-pink, its tube very slender, about 6 mm. long, pulverulent-puberulent outside, its limb about 3 mm. wide.

The type of this species was collected by Ynes Mexia (no. 4448a) in openings of cut-over woods, alt. 690 m., at about km. 2 along the road from Viçosa to Barroso, Minas Geraes, Brazil, on March 9, 1930, and is deposited in the Britton Herbarium at the New York Botanical Garden.

MALVA MOSCHATA f. ALBA Moldenke, Am. Midl. Naturalist 35: 336, hyponym (1946), f. nov.

Haec forma a forma typica speciei corollis albis recedit. -- This form differs from the typical form of the species in

having white corollas. The type was collected by H. N. Moldenke (no. 15166) in a grassy field about 2 miles west of Warren, Warren County, Pennsylvania, on July 1, 1943, and is deposited in the herbarium of the Carnegie Museum at Pittsburgh. The form is quite common in this locality.

**MARIPA CUATRECASASI** Moldenke, sp. nov.

Frutex scandens; ramis ramulisque glabris; petiolis crassis curvatis glabris; laminis coriaceis ellipticis magnis longis acuminatis integris, ad basin rotundatis vel obtusis, utrinque glabris; inflorescentiis axillaribus corymbiformibus paucifloris; pedunculis fructiferis crassis glabris; pedicellis fructiferis glabris; calyce fructifero glabro.

Large liana; stems and branches glabrous; internodes apparently quite variable in length; leaves alternate; petioles stout, 2--2.5 cm. long, curved, glabrous, wrinkled in drying; blades coriaceous, clear-green on both surfaces, elliptic, 22--25 cm. long, 8.5--9 cm. wide, acuminate at apex, entire, rounded or obtuse at base, glabrous on both surfaces, not particularly shiny; midrib plane or very obscurely impressed above, very prominent beneath; secondaries slender, 7 or 8 per side, arcuate-ascending, not reaching the margins, mostly arcuate-joined about 5 mm. from the margins, plane above, prominent beneath; veinlet reticulation rather sparse, indiscernible above, only the largest portions discernible beneath; inflorescence axillary, corymbiform, few-flowered; flowers not seen; fruiting-peduncles very stout, 6--7 cm. long, glabrous, its branches few, 1--1.5 cm. long, glabrous; fruiting-pedicels stout, 1--1.5 cm. long, glabrous; fruiting-calyx incrassate, glabrous throughout, the sepals suborbicular, 5--6 mm. long and wide, rounded at apex; fruit elliptic, 3.5--4 cm. long, 2--2.5 cm. wide, yellow, acuminate at apex and base, its pericarp rather tough, enclosing 2 seeds in a dark sweet gelatinous endocarp.

The type of this species was collected by José Cuatrecasas (no. 16531) at La Trojita, alt. 5--50 m., Río Calima, in the region of the Chocó, El Valle, Colombia, between February 19 and March 10, 1944, and is deposited in the Britton Herbarium at the New York Botanical Garden. The species is quite distinct, differing at once from all the species of the genus listed in Martius, *Flora Brasiliensis* 7: 205--210 (1871) by being a large liana with a perfectly glabrous calyx, and from all the species listed by Gleason in the *Bulletin of the Torrey Botanical Club* 56: 107--111 (1929) by its axillary inflorescences, very large non-cuneate leaves, and lack of pubescence. The generic determination was made by Joseph Monachino.

**MEGAPTERIUM BRACHYCARPUM** var. **WRIGHTII** (A. Gray) Moldenke,

comb. nov.

Oenothera wrightii A. Gray, Fl. Wright. 2: 57. 1853.

PAEPALANTHUS BRITTONI Moldenke, Known Geogr. Distrib. Eriocaul. 5 & 45, hyponym (1946), nom. nov.

Paepalanthus montanus (Britton) Moldenke, Rev. Sudam. Bot. 4: 17. 1937 [not P. montanus Alv. Silv., Fl. Montium 76. 1928].

PAEPALANTHUS COUTOËNSIS Moldenke, Known Geogr. Distrib. Eriocaul. 11 & 47, hyponym (1946), nom. nov.

Paepalanthus barbulatus Alv. Silv., Fl. Montium 211, pl. 139 & 140. 1928 [not P. barbulatus Herzog in Fedde, Repert. 20: 83. 1924].

PAEPALANTHUS GLEASONII Moldenke, Known Geogr. Distrib. Eriocaul. 6 & 49, hyponym (1946), nom. nov.

Paepalanthus robustus Gleason, Bull. Torrey Bot. Club 58: 330. 1931 [not P. robustus Alv. Silv., Flor. Serr. Mineiras 53. 1908].

PAEPALANTHUS NEOCALDENSIS Moldenke, Known Geogr. Distrib. Eriocaul. 14 & 51, hyponym (1946), nom. nov.

Paepalanthus caldensis Alv. Silv., Fl. Montium 186, pl. 120. 1928 [not P. caldensis Malme, Bihang till K. Sv. Vet. Akad. Handl. 27, Afd. 3, no. 11: 29, pl. 2, fig. 3. 1901].

PAEPALANTHUS NEOPULVINATUS Moldenke, Known Geogr. Distrib. Eriocaul. 51 & 61, hyponym (1946), nom. nov.

Paepalanthus pulvinatus Alv. Silv., Fl. Montium 37, pl. 18. 1928 [not P. pulvinatus N. E. Br. in Thiseleton-Dyer, Fl. Trop. Afr. 8: 263. 1902].

PHYLA YUCATANA Moldenke, sp. nov.

Herba procumbens; ramis gracilibus plerumque sulcatis canescento-strigillosis; petiolis plerumque alatis obscure canescento-strigillosis vel glabrescentibus; laminis ovatis vel ovato-ellipticis viridibus valde dentatis, ad apicem rotundatis vel acutis, ad basin acuminatis, utrinque dense canescento-strigillosis.

Procumbent herb, freely branched from the base; branches slender, rooting at the nodes, obtusely and rather irregularly tetragonal, often deeply and irregularly sulcate, often reddish or purplish toward the base, canescent-strigillose with closely appressed antrorse hairs, the tips ascending or erect; secondary branches more slender, stramineous, erect; nodes annulate; principal internodes 1--5 cm. long; leaves decussate-opposite, numerous; petioles 1--5 mm. long, mostly winged and merging into the base of the blade, rather

obscurely canescent-strigillose like the twigs or becoming glabrescent; blades ovate or ovate-elliptic, mostly conspicuously widest below the middle, uniformly green on both surfaces, 1.5--4 cm. long, 0.5--2 cm. wide, rounded or acute (in outline) at apex, acuminate at base and prolonged into the petiole, the margins conspicuously and regularly dentate with sharply acute or apiculate broadly triangular rather divergent teeth from the apex to the widest part, the margins of the teeth rather thick and often more or less involute, both surfaces rather densely canescent-strigillose with short closely appressed hairs usually visible only microscopically; midrib slender, plane above, very strong and prominent beneath; secondaries slender, 4--6 per side, plane above, very strong and prominent beneath, extending conspicuously to the leaf-margin and ending in the sinus between two teeth, often with 1 or 2 short branches issuing almost at the apex and extending to the apiculation of the nearest tooth; tertiaries and veinlet reticulation not visible; in drying, the leaves become almost plicate; inflorescence axillary, capitate; peduncles slender, 2.5--5.5 cm. long, usually only one per node, deeply sulcate, rather densely canescent-strigillose or glabrescent; heads densely many-flowered, 4--8 mm. long; bractlets ovate, about 3 mm. long, 1.5 mm. wide at the base, sharply acute at apex, densely canescent-strigose, strongly costate; calyx minute; corolla about 3 mm. long in all, its limb about 1.5 mm. wide.

The type of this species was collected by Percy Gentle [C. L. Lundell 4780] along the Corozal-Pachacan road, British Honduras, on July 20, 1933, and is deposited in the Britton Herbarium at the New York Botanical Garden. The species was hitherto confused with P. nodiflora var. reptans (H.B.K.) Moldenke, the type of which is Venezuelan.

PHYLA YUCATANA var. PARVIFOLIA Moldenke, var. nov.

Haec varietas a forma typica speciei omnibus partibus minoribus et densiore canescento-strigosis recedit. -- This variety differs from the typical form of the species in being smaller in all its parts and more conspicuously canescent-strigose throughout. The stems and branches are often slightly woody; the internodes are often reduced to 1 cm. or less; the petioles are obsolete or only 1--2 mm. long; the leaf-blades are usually less than 1 cm. long and wide, with the venation plainly impressed above and prominent beneath, imparting a decided plicate appearance to the leaves, conspicuously canescent-strigose.

The type of this variety was collected by George B. Hinton (no. 6024) on a llano at Mal Paso, Heutamo district, Michoacan, Mexico, on May 9, 1934, and is deposited in the Britton Herbarium at the New York Botanical Garden. The col-

lector records the vernacular name "hierba de hormiga."

*PRIVA GRANDIFLORA* (Ort.) Moldenke, comb. nov.

*Verbena grandiflora* Ort., Hort. Matr. Dec. 2. 1797.

*SVENHEDINIA TRUNCATA* Moldenke, sp. nov.

Frutex vel arbor; ramulis crassiusculis glabris valde annulatis medullosis; petiolis crassis glabris marginatis, ad apicem biglanduliferis; laminis coriaceis ovatis magnis, ad apicem obtusis, integris subundulatis, ad basin late truncatis, utrinque glabris pernitidis; reticulo venularum valde perspicue utrinque prominente.

Shrub or tree; branchlets rather stout, glabrous, plainly annulate at the nodes, the annulation confluent with the upper margin of the petioles, very pithy; principal internodes 1--4.5 cm. long; leaves alternate; petioles stout, 5.5--8 cm. long, glabrous, flattened above, with two corky margins which terminate in two closely adjacent obtuse glands at the apex; blades coriaceous, ovate, to about 16 cm. long and 13 cm. wide, obtuse at apex, entire but slightly undulate along the margins, broadly truncate at base, glabrous and very shiny on both surfaces; midrib plane above, very prominent beneath, branching into 12 or more secondaries per side and very numerous tertiaries from the midrib, the secondaries, tertiaries, and veinlets forming a very abundant and beautifully conspicuous prominent reticulum on both surfaces, the reticulum equally prominent on both surfaces; inflorescence not seen.

The type of this species was collected by Julián Acuña Galé (no. 14069) at Alto Babiney, Sur del Turquino, Oriente, Cuba, on August 1, 1935, and is deposited in the herbarium of the Estacion Experimental Agronomica at Santiago de las Vegas. The species is obviously related to *S. minor* (Urb.) Urb., which differs notably in its very variable but always acute or attenuate leaf-blade bases.

*SYMPHOREMACEAE* Moldenke, nom. nov.

*Symphoremacées* Van Tieghem, Journ. de Bot. 12: 359--365. 1898.

*SYNGONANTHUS MINUTULUS* (Steud.) Moldenke, Known Geogr. Distrib. Ericocaul. 18 & 37, hyponym (1946), comb. nov.

*Eriocaulon minutulum* Steud., Syn. Fl. Cyp. 2: 270. 1855.

*TOXICODENDRON SUCCEDANEA* (L.) Moldenke, comb. nov.

*Rhus succedanea* L., Mant. 2: 221. 1767.

*TOXICODENDRON VERNICIFLUA* (Stokes) Moldenke, comb. nov.

*Rhus verniciflua* Stokes, Bot. Mat. Med. 2: 164. 1812.

## URGINEA SCILLA f. RUBRA Moldenke, f. nov.

Haec forma a forma typica speciei bulbis rubris recedit. -- This form differs from the typical form of the species in having red bulbs. The two forms of the species are kept separate in the trade, where the species is widely handled as a crude drug, and, according to my friend, Joseph Monachino, natives of Sicily invariably distinguish them. Up to the present time, however, I cannot find that the red form has ever received botanic recognition.

## VARRONIA ACUNAE Moldenke, sp. nov.

Frutex; ramis ramulisque subgracilibus subangulato-sulcatis dense puberulo-furfuraceis, juventute adpresso-strigillosis; foliis alternis numerosis; petiolis subobsoletis vel usque ad 2.5 mm. longis strigilloso-puberulis; foliis subcoriaceis anguste ellipticis argute acutis valde revolutis, ad basin attenuato-acutis, supra obscure pilosis vel glabrescentibus, subtus dense fulvo-strigillosis; inflorescentiis terminalibus capitatis.

Shrub; branches and branchlets rather slender, somewhat angulate-sulcate, densely puberulent-furfuraceous with fulvous hair, the younger ones more distinctly appressed-strigillose with incanous hair; leaf-scars elevated, corky-margined; leaves alternate, numerous; petioles to 2.5 mm. long (or almost obsolete on young leaves), rather densely strigillose-puberulent with fulvous appressed hair; leaf-blades subcoriaceous, narrow-elliptic, 1--4 cm. long, 4--10 mm. wide, sharply acute at apex, attenuate-acute at base, the margins very pronouncedly revolute, smooth to touch above and very obscurely scattered-pilose, glabrescent in age, rather densely strigillose-puberulent with fulvous hair beneath; inflorescence terminal, capitate; peduncles similar to the branchlets in texture, shape, and color, 3--4.5 cm. long, densely appressed-puberulent or strigillose with more or less fulvous hair, or slightly incanous toward the apex, several sulcate; heads globose, about 1 cm. in diameter, many-flowered; calyx campanulate or cupuliform, about 3 mm. long, rather sparsely strigose, its rim distinctly 5-lobed, each lobe terminating in a filiform twisted densely strigose appendage about 3 mm. long, the many contorted appendages very conspicuous in the flowering and fruiting heads; fruit elliptic, about 3 mm. long and 1.8 mm. wide, beaked at the apex, glabrous, somewhat reticulate.

The type of this species was collected by Julián Acuña Galé (no. 12687) along the highway at Delta No. 1, Moa, Oriente, Cuba, on April 17, 1945, and is deposited in the herbarium of the Estacion Experimental Agronomica at Santiago de las Vegas. The species is obviously related to V. globosa Jacq., which has similar flower-heads, but entirely

different leaves.

VARRONIA CORIACEA Moldenke, sp. nov.

Frutex; ramulis gracilibus griseis dense setuloso-hispidis, pilis ad basin bulbosis; internodiis valde abbreviatis; petiolis gracilibus densae setuloso-hispidis; laminis subcoriaceis ellipticis vel lanceolato-ellipticis, ad apicem obtusis, ad basin rotundatis, irregulariter denticulatis revolutis; supra juventute dense setuloso-hispidis, senectute scabris, subtus setuloso-hispidis; costa venisque venulisque valde supra impressis, subtus prominentibus; inflorescentiis terminalibus capitatis setuloso-hispidis.

Shrub; branchlets slender, gray, densely setulose-hispid, with bulbous-based hairs which, upon being rubbed off, leave the branchlets conspicuously verruculose; principal internodes greatly abbreviated, usually 1--1.5 cm. long; leaf-scars elevated on corky circular sterigmata; petioles slender, about 1 cm. long, densely setulose-hispid; blades subcoriaceous, elliptic or lanceolate-elliptic, 3.5--5.5 cm. long, 1.7--3 cm. wide, obtuse at apex, rounded at base, rather irregularly denticulate except at the base, but the margins so much revolute that the teeth are not obvious in the dried state, scabrous above with short white bulbous-based hairs, setulose-hispid beneath (and above when young) with longer more slender and not so plainly bulbous-based hairs, the hairs on the larger venation more plainly bulbous-based; midrib deeply impressed above, very prominent beneath; secondaries and tertiaries deeply impressed above, giving the leaf a very bullate aspect, prominent beneath; inflorescence terminal, capitate, varying from slightly to very densely setulose-hispid with long white spreading hairs, densely many-flowered; peduncles slender, 1--2 cm. long, densely setulose-hispid; calyx campanulate, about 6 mm. long, puberulent and also more or less setose, its rim regularly 5-lobed, the lobes sharply acute and about 2 mm. long; corolla exerted, glabrous, its limb about 1 cm. wide.

The type of this species was collected by my good friend and colleague, Julián Acuña Galé (no. 14120) [an isotype is labelled "Van Herman 14120"] at Lengua de Fajaro, Mayari, Oriente, Cuba, in March, 1943, and is deposited in the herbarium of the Estacion Experimental Agronomica at Santiago de las Vegas. The species is apparently related to V. lima Desv., which differs in its non-hispid branches and inflorescences, few-flowered heads, and leaf-blades acute or attenuate at the base, and to Varronia Grisebachii (Urb.) Moldenke [Cordia Grisebachii Urb., Symb. Ant. 4: 477. 1908], which differs markedly in its leaf-blades being acute at the base and in its non-hispid pubescence on branchlets, petioles, and inflorescences.



**VARRONIA MOËNSIS** Moldenke, sp. nov.

Frutex; ramis gracilibus griseis glabris; foliis alternis; petiolis gracilibus glabris; laminis subcoriaceis lanceolatis vel suboblanceolatis utrinque glabris nitidis brunnescentibus integris subrevolutis, ad apicem acutis vel breviter acuminatis, ad basin longe attenuatis; inflorescentiis axillaribus capitatis; pedunculis filiformibus valde elongatis nutantibus glabris.

Shrub; branches slender, gray, glabrous, marked with scattered elevated lenticels; leaves alternate; petioles slender, 2--5 mm. long, glabrous, flattened or slightly canaliculate above; leaf-blades subcoriaceous, lanceolate or suboblanceolate, 1.2--3.8 cm. long, 4--9 mm. wide, glabrous on both surfaces, shiny above, brunnescent in drying, acute or short-acuminate at apex, entire and somewhat revolute along the margins, long-attenuate at base; inflorescence axillary, capitate; peduncles filiform, 1.5--4.5 cm. long, mostly greatly elongated and nutant, glabrous, slightly amplicate at the apex; receptacle club-shaped, very sparsely short-pilose.

The type of this species was collected by Julián Acuña Galé (no. 12686) along the road at Delta No. 1, Moa, Oriente, Cuba, on April 17, 1945, and is deposited in the herbarium of the Estacion Experimental Agronomica at Santiago de las Vegas. The species is apparently related to V. longipedunculata Britton & P. Wils., from which it may at once be distinguished by its much narrower leaf-blades and its filiform nutant peduncles.

**\*VERBENA BEALEI** Moldenke, nom. nov.

Verbena hispida x litoralis Dermen, Cytologia 7: 164, 169, 170, 171, & 175. 1936.

**XVERBENA BINGENENSIS** Moldenke, hybr. nov.

Herba mediocriter magna, ut videtur hybrida naturalis; ramis rubiginosis obtuse tetragonis, juventute pubescentibus; ramulis argute tetragonis dense albido-pubescentibus; petiolis alatis brevibus; laminis firme chartaceis fragilibus ovatis irregulariter inciso-laciniatis utrinque substri-goso-pubescentibus, supra scaberrimis; inflorescentiis simplicibus vel pauca ramosis axillaribus.

Medium-sized herb, apparently a natural hybrid between V. bracteata Lag. & Rodr. and V. lasiostachys var. septentrionalis Moldenke; stems medium, slightly woody at the base, obtusely tetragonal, brown, often blotched, rather abundantly pubescent with soft weak white hairs about 1 mm. long, wearing off in age; nodes annulate; principal internodes short, 2.5--5 cm. long; branches numerous, slender, more sharply tetragonal and more densely white-pubescent

with soft hairs; leaves decussate-opposite; petioles short, 2--5 mm. long, winged, grading imperceptibly into the blade; blades firmly chartaceous, brittle in drying, very rough above (when the finger is drawn downwards) and slightly so beneath, ovate in outline, to 5 cm. long, mostly about 1--1.5 cm. wide, the largest to 3 cm. wide at base, irregularly incised-laciniate, the two lowest laciniae often lobe-like and spreading on the largest leaves, abundantly substrigose-pubescent on both surfaces, the hairs very variable in length beneath and densest on the venation; venation impressed above, prominent beneath; inflorescence abundant, simple or few-branched, in the axils of all the upper leaves; peduncles slender, 1--5 cm. long, sharply tetragonal, densely short-pubescent; rachis slender, densely pubescent with rather stiff forward-pointing white hairs of various lengths; spikes to about 10 cm. long, densely many-flowered, apparently setting seed very poorly, the mature calyxes rather distant; bractlets large and conspicuous, very variable in size, 4--8 mm. long, lanceolate, the lowermost slightly foliaceous, attenuate-acuminate, about 1 mm. wide at base, more or less strigose, not keeled except when very old, mostly greatly exceeding the calyx; calyx 3--4 mm. long, densely strigose; corolla-tube slightly surpassing the calyx, densely puberulent outside, its limb about 2 mm. wide.

The type of this natural hybrid was collected by Wilhelm N. Saksdorf in bottomlands near Bingen, Klickitat County, Washington, on July 9, 1898, and is deposited in the Britton Herbarium at the New York Botanical Garden.

VERBENA BRACTEATA f. ALBIFLORA (Cockerell) Moldenke, comb. nov.

Verbena bracteosa f. albiflora Cockerell in Daniels, Fl. Boulder Colo. 204. 1911.

×VERBENA COVASII Moldenke, nom. nov.

Glandularia santiaguensis x laciniata Schnack & Covas, Darwiniana 7: 74. 1945; Rev. Argent. Agronom. 12: 228. 1945.

VERBENA CUMINGII Moldenke, sp. nov.

Herba; ramis procumbentibus stramineis tetragonis albobracteatis; petiolis late alatis; laminis valde dissectis vel bipinnatifidis utrinque strigosis, lobis subacutis revolutis tenuiter chartaceis; inflorescentiis solitariis terminalibus; pedunculis elongatis rectis hirsutulis.

Herb; stems apparently procumbent, ascending at the tips, stramineous, tetragonal, hirsute with long white spreading or reflexed hairs; principal internodes 2--3.5 cm. long; nodes annulate, densely hirsute; leaves decussate-opposite, usually with an abbreviated branch in each axil, the branch

very leafy and very hirsute; petioles about 5 mm. long or slightly longer, broadly winged and indistinguishable from the lamina; blades deeply dissected or bipinnatifid, strigose on both surfaces, to 4 cm. long, the lobes subacute, the margins slightly revolute, uniformly green on both surfaces, thin-chartaceous; midrib and secondaries very slender, obscure above, prominulous beneath; inflorescence solitary at the end of each stem; peduncles erect, elongate, 15--17 cm. long, rather more sparsely hirsutulous than the stems but similar in color and texture, terminated by a pair of opposite flowers with their subtending bracts and, about 1 cm. beyond them, a dense head of flowers; bractlets lanceolate, 8--9 mm. long, about 1 mm. wide at the base, long-attenuate at apex, hirsute-ciliate along the lower margins and short-strigillose on the back and toward the apex on the margins; calyx tubular, 10--11 mm. long (including the teeth), strigose with appressed whitish hairs of several lengths, its rim irregularly 5-toothed, the teeth long-attenuate, 1--2 mm. long; corolla large, showy, its tube projecting about 2--3 mm. beyond the calyx, smooth outside, its limb about 12 mm. wide, the lobes deeply bilobed at apex; anther-appendages large, black, conspicuously exerted.

The type of this species was collected by Hugh Cuming (no. 908) somewhere in Chile, sent to the Martius Herbarium in 1835, now deposited in the herbarium of the Jardin Botanique de l'Etat at Brussels.

*VERBENA CURTISII* Moldenke, sp. nov.

Herba; ramis tetragonis stramineis leviter strigillosis; petiolis gracilibus parce pilosis; laminis leviter chartaceis lanceolatis acutis vel subacutis regulariter serratis, ad basin attenuatis, utrinque strigillosis; spicis gracilibus numerosis multifloris elongatis.

Herb; stems tetragonal, stramineous, lightly strigillose; nodes annulate, with a transverse band of short white hairs; leaves decussate-opposite, only the upper ones in and just below the inflorescence seen; petioles slender, 1--10 mm. long, sparsely scattered-pilose with short white hairs; blades thin-chartaceous, light-green, lanceolate, 1.5--4 cm. long, 7--20 mm. wide, acute or subacute at apex, attenuate into the petiole at base, rather regularly serrate from the widest part to the apex with blunt or acute broadly triangular forward-pointing teeth, scattered-strigillose on both surfaces with short appressed whitish hairs, more densely so along the venation beneath; inflorescence abundant; spikes slender, numerous, two from each upper node, three at the apex of each branch, 4--15 cm. long, rather densely flowered and fruited, often branched toward the base, the branches subtended by reduced leaves; peduncles slender, usually ab-

breviated to about 1 cm., lightly strigillose; bractlets lanceolate, about 2 mm. long, long-attenuate at apex, ciliate-margined, otherwise glabrate, persistent after the fruit and fruiting-calyx have fallen; fruiting-calyx about 2 mm. long, strigillose, especially toward the apex, the teeth coming together over the apex of the fruit and forming a distinctly sharp point until the calyx is ruptured; fruit 1 mm. long, smooth, long-coherent; corolla very small, the tube about 2 mm. long, the limb slightly exerted.

The type of this species was collected by Moses Ashley Curtis somewhere in "Carolina" [probably North Carolina] and is labelled "Verbena carolina L." It is Herb. G. Geete no. 5702, now deposited in the herbarium of the Botaniska Trädgård at Göteborg, Sweden. The species reminds one of V. carolina L. in its general aspect, but differs markedly in its minute pubescence. It also resembles V. urticifolia L., but its fruiting-calyxes are more like those of V. scabra Vahl, from which its non-scabrous leaves at once distinguish it. It differs from V. riparia Raf. and V. urticifolia in its dense fruiting-spikes and from the former in its non-lobed leaves. Its full fruiting-calyxes seem to preclude V. Engelmannii Moldenke or any other hybrid origin.

×VERBENA DERMENI Moldenke, nom. nov.

Verbena hispida x bonariensis Dermen, Cytologia 7: 164, 165, 170, 171, & 175. 1936.

VERBENA DISSECTA f. GLANDULIFERA (Sanzin) Moldenke, comb. nov.

Verbena erinoides var. glandulifera Sanzin, Anal. Soc. Cientific. Argent. 88: 131, fig. 34b. 1919.

VERBENA HAYEKII Moldenke, nom. nov.

Verbena procumbens Hayek in Engl., Bot. Jahrb. 42: 163. 1908 [not V. procumbens Forsk., Fl. Aegypt. Arab. 10. 1775].

VERBENA HOOKERIANA (Covas & Schnack) Moldenke, comb. nov.

Glandularia Hookeriana Covas & Schnack, Rev. Argent. Agronom. 12: 57, fig. 1. 1945.

×VERBENA KONDAI Moldenke, nom. nov.

Verbena racemosa x erinoides Dermen, Cytologia 7: 163. 1936.

×VERBENA LECOCQI Moldenke, nom. nov.

Verbena hispida x prostrata Dermen, Cytologia 7: 170. 1936.

VERBENA MONACENSIS Moldenke, sp. nov.

Herba; ramis prostratis ramosis acute tetragonis pilosis; ramulis fere submarginatis dense adpresseque pubescentibus; petiolis alatis strigosis; laminis chartaceis valde trifidis incis, lobis obtusis ellipticis vel oblanceolatis utrinque strigosis, marginibus subrevolutis; inflorescentiis solitariis terminalibus dense multifloris senectute elongatis.

Herb; stems apparently prostrate, ascending toward the tips, branched, sharply tetragonal, brownish, lightly and irregularly pilose, less so in age; branches more sharply tetragonal (almost submarginated) and more densely appressed-pubescent; nodes annulate; principal internodes 2--7 cm. long; leaves decussate-opposite, often bearing abbreviated and very leafy branches in their axils; petioles to 1 cm. long, usually much shorter, winged and almost indistinguishable from the rachis of the lamina, strigose on both surfaces; blades uniformly green on both surfaces, chartaceous, deeply trifid, the divisions again incised, the individual lobes mostly obtuse at apex and elliptic or oblanceolate in outline rather than linear or oblong, strigose on both surfaces, the margins slightly revolute, the midrib and secondaries slender, obscure above, prominulous beneath; inflorescence solitary at the end of each stem and branch, at first congested, later elongating to 4 cm. or more, densely many-flowered; peduncles slender, 1.5--6.5 cm. long, densely strigose or appressed-pubescent, conspicuously tetragonal like the branches; bractlets lanceolate, about 6 mm. long, 1 mm. wide at the base, densely short-pubescent with subappressed whitish hairs, densely white-ciliate along the margins, long-attenuate at apex; calyx tubular, 8--9 mm. long (including the teeth), strigillose, 5-costate, its rim shortly 5-toothed, the teeth triangular and usually less than 1 mm. long; corolla large, showy, its tube projecting about 5 mm. beyond the calyx, glabrous outside, its limb about 1 cm. wide, the lobes shallowly bilobed at the apex; anther-appendages not exerted.

The type of this species is a specimen from the Martius Herbarium now deposited in the herbarium of the Jardin Botanique de l'Etat at Brussels, said to have been collected from cultivated plants at Munich, Germany.

×VERBENA NOACKI Moldenke, nom. nov.

Verbena hispida × hastata Dermen, Cytologia 7: 170. 1936.

VERBENA PARODII (Covas & Schnack) Moldenke, comb. nov.

Glandularia Parodii Covas & Schnack, Rev. Argent. Agronom. 11: 94, fig. 3. 1944.

VERBENA FERAKII (Covas & Schnack) Moldenke, comb. nov.

Glandularia Ferakii Covas & Schnack, Rev. Argent. Agro-

nom. 11: 89, fig. 1. 1944.

VERBENA FERENNIS var. JOHNSTONI Moldenke, var. nov.

Haec varietas a forma typica speciei ubique dense hirtellis recedit. -- This variety differs from the typical form of the species in having its stems, leaves, and rachis densely spreading-hirtellous, the leaves to 5 cm. long, the lowermost often with several linear lobes.

The type of this variety was collected by L. R. Stanford, K. L. Retherford, and R. D. Northcraft (no. 915) among varied vegetation of large shrubs, small trees, and herbs, in broad damp river-beds, alt. 1950 m., 12 km. northwest of Palmillas, on the road to Miquihuana, Tamaulipas, Mexico, on August 14, 1941, and is deposited in the Britton Herbarium at the New York Botanical Garden. It was originally distributed as "Verbena Shrevei Johnston."

VERBENA RIGIDA var. REINECKII (Briq.) Moldenke, comb. nov.

Verbena venosa var. Reineckii Briq., Ann. Conserv. & Jard. Bot. Genève. 3: 164. 1899.

VERBENA SANTIAGUENSIS (Covas & Schnack) Moldenke, comb. nov.

Glandularia santiaguensis Covas & Schnack, Rev. Argent. Agronom. 11: 92, fig. 2. 1944.

× VERBENA SCHNACKII Moldenke, nom. nov.

Glandularia peruviana x megapotamica Schnack & Covas, Rev. Argent. Agronom. 12: 227--228, pl. 12, figs. 1--3. 1945.

× VERBENA SUKSDORFI Moldenke, hybr. nov.

Herba alta ut videtur hybrida naturalis; ramis mediocriter crassis tetragonis breviter pubescentibus scabris, pilis ad basin bulbosis; petiolis late alatis; laminis crassiusculis firmis scaberrimis fragilibus valde trifidis vel laciniato-incisis ovatis, ad basin saepe 2-lobatis, marginibus revolutis, utrinque breviter pubescentibus, pilis ad basin bulbosis; spicis perelongatis dense multifloris.

Tall herb, apparently a natural hybrid between V. officinalis L. and V. lasiostachys var. septentrionalis Moldenke; stems rather stout, obtusely tetragonal below, sharply angled above, light-colored, rather abundantly short-pubescent toward the base with stiff whitish often bulbous-based hair less than 1 mm. long, less densely so toward the apex and on the branches, peduncles, and rachis, but sufficiently abundant throughout to impart a very rough and harsh feel to these organs especially when the finger is moved downwards, the uppermost portions of the stem with margined angles, the stems, branches, and peduncles also very densely fine-puberulent with microscopic (almost punctiform) hairs, the rachis

more conspicuously puberulent with longer whitish forward-pointing hairs; principal internodes mostly elongate, 3--8 cm. long; leaves decussate-opposite, usually with clusters of smaller ones on greatly abbreviated branches in their axils; nodes plainly annulate; petioles 1--2 cm. long, broadly winged and not plainly distinguishable from the blades into which they grade; blades rather thick and firm, very harsh to touch on both surfaces, very brittle in drying, to about 9 cm. long, varying from deeply 3-fid to undivided and merely laciniate-incised along the margins, ovate in outline, the two basal lobes on the largest leaves usually wide-spreading, giving the blade a width of 5.5 cm. at the base, incised-laciniate, the margins more or less revolute, more or less densely short-pubescent on both surfaces with stiff forward-pointing bulbous-based hairs, more densely and lastingly so on the venation beneath; inflorescence copiously branched at the apex of the stem; spikes greatly elongate, usually 15--40 cm. long, densely many-flowered, but apparently not setting fruit; peduncles mostly abbreviated, acutely tetragonal, margined; bractlets ovate, about 2 mm. long, 0.5--1 mm. wide at base, ciliate-margined to the apex, puberulent on the back, acuminate, keeled; calyx slightly longer than the subtending bractlet, about 3 mm. long, whitish-strigose; corolla-tube equalling the calyx, its limb about 2 mm. wide.

The type of this remarkable plant was collected by Wilhelm N. Suksdorf in a garden at Bingen, Klickitat County, Washington, on November 21, 1904, and is deposited in the herbarium of the State College of Washington at Pullman. The plant seems definitely to be a hybrid because the greatly elongated spikes in the only two specimens seen contain thousands of mature calyxes, but not a single fruit. The other described natural hybrids in the genus are also noted for their paucity in fruiting, but none has the lack of fruit as complete as this one!

VERONICA SERPYLLIFOLIA f. ALBIFLORA Moldenke, Am. Midl.

Naturalist 35: 376, hyponym (1946), f. nov.

Haec forma a forma typica speciei corollis albis recedit. -- This form differs from the typical form of the species in having pure-white corollas. The type was collected by H. N. Moldenke (no. 17293) in a field at Cranbrook Farm, North Warren, Warren County, Pennsylvania, on May 8, 1945, and is deposited in the herbarium of the Academy of Natural Sciences at Philadelphia.

XCHRYSANTHEMUM CULTORUM Moldenke, nom. nov.

*Chrysanthemum morifolium* Ram. x *C. sibiricum* Fisch. ex Rehd., Man. Cult. Trees & Shrubs, ed. 2, 882. 1940.